

Appl. No. 10/032,082
Amdt. Dated Mar. 23, 2004
Reply to Office action of February 6, 2004

Remarks

Claim Rejections Under 35 U.S.C. 102

Examiner has rejected claims 1-3, 5, 9-11, 13, 14, 16 and 18 under 35 U.S.C. 102 as being anticipated by Shi et al. (previously relied upon).

Examiner states that Shi et al. discloses the claimed limitations, the first and second bores being disposed on either side of the mount, extending from the collimators 106 and 114 to the reflectors 118 and 112, the passage intersecting the bores at the flat faces as noted (see para. 14 on page 5 of the final Office action).

Applicant respectfully traverses Examiner's reasoning as follows:

Regarding claims 1 and 9, firstly, **Examiner has incorrectly characterized Shi et al. as disclosing the claimed limitations.** Shi et al. disclose a variable optical attenuator (VOA) with a mount 202 having two reflectors 108, 112 and two optical fibers 106, 114 (see Fig. 2 thereof). The mount is fixed on two ribs defined in two inner sides of the VOA. The optical fibers 106, 114 are fixed on a supporter connecting to the ribs by two clips and two screws. There are only two spaces between the optical fibers and the mount, not two bores. There is only a space between the two reflectors 108, 112, not a passage. The present invention discloses a VOA comprising a mount 40 with first and second primary bores 401, 402, and a passage intersecting the first and second primary bores. The two optical fibers 86, 87 of the present invention are respectively retained in the first and second primary bores. The ordinary meaning of passage is a way through something. In the present invention, the passage is a way through the mount. This is exemplified in, for example, FIG. 4 of the drawings. The passage as stated and indicated by Examiner in the Office action cannot properly be characterized as

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a way through anything disclosed in the VOA of Shi et al. Therefore, Shi et al. fails to disclose **a mount with first and second primary bores, and a passage intersecting the first and second primary bores.**

Secondly, **Shi et al. does not render obvious the claimed limitation of the mount.** Because the mount 202 and the optical fibers 106, 114 of Shi et al. are respectively fixed on the ribs and the supporter, the VOA of Shi et al. is difficult to manufacture, particularly with regard to achieving precise collimation between the optical fibers 106, 114 and the reflectors 108, 112. To achieve precise collimation, the ribs and the supporter of the VOA of Shi et al. must firstly be fixed on predetermined positions, the mount 202 must secondly be fixed on the ribs, and the optical fibers 106, 114 must thirdly be fixed on the supporter by the clips and the screws in a predetermined orientation to the reflectors 108, 112. **These successive steps accumulate error adversely affecting the collimation.** Even if all of these steps are precisely performed, the optical fibers 106, 114 may easily move due to loosening of the screws and the clips from causes such as vibration. It is difficult to ensure precise collimation for long-term usage. Compare this with the VOA of the present invention, which is easy to manufacture and achieves precise collimation. This is because the mount has two parallel primary bores, a passage perpendicular to the bores, and two flat reference surfaces 406, 407 perpendicular to each other which are respectively defined at intersections of the bores and the passage. Thus precise and long-lasting collimation can be achieved when the optical fibers are inserted into the bores, without any further need for other elements or processing steps. Therefore **applicants submit that the present invention is patentably distinguishable over Shi et al. under 35 U.S.C. 103.** Withdrawal of the rejections as to claims 1 and 9 and allowance thereof are respectfully requested.

Regarding claims 2-3, 5, 10-11, 13, 14, 16 and 18, since these claims directly

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or indirectly depend from claims 1 and 9, these claims should likewise be allowable.

Claim Rejections Under 35 U.S.C. 103(a)

Examiner has rejected claims 6, 8, 15, 17 and 19 under 35 U.S.C. 103(a) as being unpatentable over Shi et al. Examiner has rejected claims 4, 7, 12 and 20 under 35 U.S.C. 103(a) as being unpatentable over Shi et al. in view of Yamamura (previously relied upon).

Applicant respectfully traverses Examiner's reasoning as follows:

Regarding claims 6, 8, 15, 17 and 19, these claims directly or indirectly depend from claims 1 and 9. Claims 1 and 9 are asserted to be allowable as detailed above, therefore claims 6, 8, 15, 17 and 19 should likewise be allowable.

Regarding claims 4, 7, 12 and 20, Examiner states that Shi et al. does not disclose the specifics of a variable resistor, and Yamamura discloses a variable resistor having a conductive slider member (wiper) 11 attached to a movable member 10. Examiner further states that one of ordinary skill in the art would have found it obvious to substitute the variable resistor of Yamamura for the potentiometer of Shi et al. (see para. 11 on page 4 of the final Office action). However, applicants assert, firstly, that Shi et al. fails to disclose **a mount with first and second primary bores, and a passage intersecting the first and second primary bores**, as detailed above with respect to claims 1 and 9. Secondly, **Shi et al. does not render obvious the claimed limitation of the mount**, as detailed above with respect to claims 1 and 9. Thirdly, the apparatus of Yamamura has a shaft 19, a movable member 10 and a carrier 18. The shaft 19 firstly rotates to actuate the movable member 10 to move along a variable resistor 12. Because the

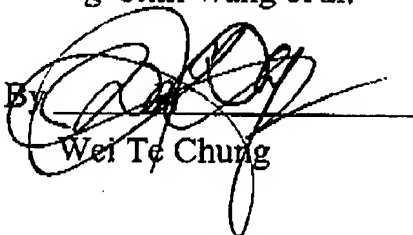
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movable member 10 is held in a holding groove 21 of the carrier 18, the movable member 10 secondly actuates the carrier 18 to move together with the movable member 10. However, the variable optic attenuator of the present invention has a carrier 30 and a slider (movable member) 31, with the carrier 30 actuating the slider 31 to move along a variable resistor 57. That is, the mechanism of the carrier 30 in relation to the slider 31 is the opposite to the mechanism of Yamamura. **Because the operation of the present invention is manifestly different from that of Yamamura, it would not have been obvious nor indeed practicable to substitute the variable resistor of Yamamura for the potentiometer of Shi et al. in order to arrive at the mechanism of the present invention.**

Accordingly, the present invention is not obvious in view of the cited references, and claims 4, 7, 12 and 20 should be allowable.

In view of the above remarks, the subject application is believed to be in a condition for allowance, and an action to such effect is earnestly solicited.

Respectfully submitted,
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